

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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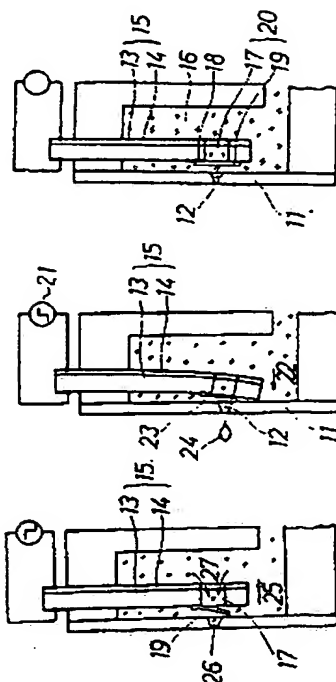
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TITLE : INK JET HEAD



**ABSTRACT :** **PURPOSE:** To simultaneously improve various characteristics such as ink droplet discharging speed, amount and response by providing a fluid rectifier having ink rectifying function from the reverse side of a nozzle forming board to the board in a pressure generating member.

**CONSTITUTION:** When a voltage 21 is applied to a piezoelectric element 13, the element 13 is contracted, a pressure generating member 15 is deformed to the direction 22 of a nozzle by the bimetal action composed with a metal plate 14. Then, the pressure of ink presented in a gap 23 between the member 15 and a nozzle forming board 11 is enhanced, and ink droplet 24 is discharged from a nozzle 12. The recovery of the suction of a nozzle meniscus 26 after discharging is performed by the supply of ink corresponding to the deformation to the direction 25 of the member 15 by the ink flow 27 through a hole 17 passing the member 17 due to the deformation of an elastic sheet 19. This fluid rectifying element is composed only of a hole 17 passing the member 15 and the sheet 19 to provide a simple structure, thereby facilitating the manufacture thereof.

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